

CLAIMS

1. (Amended) A Ge-Cr alloy sputtering target containing 5 to 50at% of Cr characterizing in that said target has a relative density of 97% or more, that the density variation of said target is within $\pm 1.5\%$, and that, in X-ray diffraction, the ratio B/A of the maximum peak intensity A of Ge phase in a 2θ range of 20° to 30° and of the maximum peak intensity B of GeCr compound phase in a 2θ range of 30° to 40° is 0.18 or more.
2. (Delete)
3. (Delete)
4. (Amended) Ge-Cr alloy sputtering target according to claim 1, wherein the composition variation in the target is within $\pm 0.5\%$.
5. (Delete)
6. A manufacturing method of a Ge-Cr alloy sputtering target, comprising the steps of evenly dispersing and mixing Cr powder of $75\mu\text{m}$ or less, and Ge powder of $250\mu\text{m}$ or less and having a BET specific surface area of $0.4\text{m}^2/\text{g}$ or less, and thereafter performing sintering thereto.
7. (Amended) A manufacturing method of a Ge-Cr alloy sputtering target according to claim 1 or claim 4, comprising the steps of evenly dispersing and mixing Cr powder of $75\mu\text{m}$ or less, and Ge powder of $250\mu\text{m}$ or less and having a BET specific surface area of $0.4\text{m}^2/\text{g}$ or less, and thereafter performing sintering thereto.
8. A manufacturing method of a Ge-Cr alloy sputtering target according to claim 6 or claim 7, comprising the steps of evenly dispersing and mixing Ge

Art 19

powder of $250\ \mu\text{m}$ or less having a BET specific surface area of 0.1 to $0.4\text{m}^2/\text{g}$, and thereafter performing sintering thereto.

9. A manufacturing method of a Ge-Cr alloy sputtering target according to any one of claims 6 to 8, wherein sintering is performed under the conditions of hot pressing, a sintering temperature of 760 to 900°C , and a bearing of 75 to $250\text{kg}/\text{cm}^2$.